

Audubon's account of this species as delightfully accurate. Of published information relating to this species in Maine, that of "W. B." appears to be the most comprehensive, namely: "The Harlequin Duck is regularly common in winter on the coast of Maine, where, however, its distribution seems to be very local." (Bull. Nutt. Orn. Club, VIII, p. 163.) To which I would add: Common only to the eastern half of the coast, where it is steadily but slowly decreasing.

Finally, I believe that there are three things favorable to this bird's holding its range: (1) The lateness and severity of the season when it is here. (2) The roughness and inaccessibility of the places to which it is now restricted. (3) The abundance and vigilance of the Gulls.

SOME NOTES ON THE PASSENGER PIGEON (*ECTOPISTES MIGRATORIUS*) IN CONFINEMENT.

BY RUTHVEN DEANE.

IN THE 'American Field' of December 5, 1895, I noticed a short note, stating that Mr. David Whittaker of Milwaukee, Wis., had in a spacious enclosure, a flock of fifty genuine Wild Pigeons. Being much interested of late in this bird, I at once wrote to Mr. Whittaker, asking for such information in detail regarding his birds as he could give me, but owing to absence from the city, he did not reply. Still being anxious to learn something further regarding this interesting subject, I recently wrote to a correspondent in Milwaukee, asking him to investigate the matter. In due time I received his reply, stating that he had seen the Pigeons, but that the flock consisted of fifteen instead of fifty birds, and inviting me to join him, and spend a few hours of rare pleasure.

On March 1, 1896, I visited Milwaukee, and made a careful inspection of this beautiful flock. I am greatly indebted to Mr. Whittaker, through whose courtesy, we saw and heard so much of

value and interest, not only in regard to his pet birds, but also about his large experience with the Wild Pigeon in its native haunts; for being a keen observer of nature, and having been a prospector for many years among the timber and mining regions of Wisconsin, Michigan and Canada, his opportunities for observation have been extensive. In the fall of 1888, Mr. Whittaker received from a young Indian two pairs of Pigeons, one of adults and the other quite young. They were trapped near Lake Shawano, in Shawano County in northeastern Wisconsin.

Shortly after being confined, one of the old birds scalped itself by flying against the wire netting, and died — the other one escaped. The young pair were, with much care and watching, successfully raised, and from these the flock has increased to its present number, six males and nine females. The enclosure, which is not large, is built behind and adjoining the house, situated on a high bluff overlooking the Milwaukee River. It is built of wire netting, and enclosed on the top and two sides with glass. There is but slight protection from the cold and the Pigeons thrive in zero weather as well as in summer. A few branches and poles are used for roosting, and two shelves, about one foot wide and partitioned off, though not enclosed, are where the nests are built and the young are raised. It was several years before Mr. Whittaker successfully raised the young, but by patient experimenting with various kinds of food, he has been rewarded. The destruction of the nest and egg, at times by the female, more often by others of the flock, and the killing of the young birds, after they leave the nest, by the old males, explains in part the slow increase in the flock. When the Pigeons show signs of nesting, small twigs are thrown on to the bottom of the enclosure, and on the day of our visit, I was so fortunate as to watch the operations of nest building. There were three pairs actively engaged. The females remained on the shelf, and at a given signal which they only uttered for this purpose, the males would select a twig or straw, and in one instance a feather and fly up to the nest, drop it and return to the ground, while the females placed the building material in position and then called for more. In all of Mr. Whittaker's experience with this flock he has never known of more than one egg being deposited. Audubon in his

article¹ on the Passenger Pigeon says: "A curious change of habits has taken place in England in those Pigeons which I presented to the Earl of Kirby in 1830, that nobleman having assured me that ever since they began breeding in his aviaries, they have laid only one egg." The eggs are usually laid from the middle of February to the middle of September, some females laying as many as seven or eight during the season, though three or four is the average.

The period of incubation is fourteen days, almost to a day, and if the egg is not hatched in that time, the birds desert it. As in the wild state, both parents assist in incubation, the females sitting all night, and the males by day. As soon as the young are hatched the parents are fed on earth worms, beetles, grubs, etc., which are placed in a box of earth, from which they greedily feed, afterwards nourishing the young in the usual way, by disgorging the contents from the crop. At times the earth in the enclosure is moistened with water and a handful of worms thrown in, which soon find their way under the surface. The Pigeons are so fond of these tidbits, they will often pick and scratch holes in their search, large enough to almost hide themselves.

When the birds are sitting during cold weather, the egg is tucked up under the feathers, and the primaries of one wing are drawn under the body as though to support the egg in its position. At such times the Pigeon rests on the side of the folded wing instead of squatting on the nest. During the first few days, after the young is hatched, to guard against the cold, it is, like the egg, concealed under the feathers of the abdomen, the head always pointing forward. In this attitude, the parents, without changing the sitting position or reclining on the side, feed the squab by arching the head and neck down, and administering the food. The young leave the nest in about fourteen days, and then feed on small seeds, and later with the old birds subsist on grains, beech nuts, acorns, etc.

The adults usually commence to molt in September and are but a few weeks in assuming their new dress but the young in the first molt are much longer. At the time of my visit the birds

¹The Birds of America, original edition, Vol. V, 1842, p. 32.

were all in perfect plumage. The young in the downy state are a dark slate color.

The Pigeons are always timid, and ever on the alert when being watched, and the observer must approach them cautiously to prevent a commotion. They inherit the instincts of their race in a number of ways. On the approach of a storm the old birds will arrange themselves side by side on the perch, draw the head and neck down into the feathers and sit motionless for a time, then gradually resume an upright position, spread the tail, stretch each wing in turn, and then, as at a given signal, they spring from the perch and bring up against the wire netting with their feet as though anxious to fly before the disturbing elements. Mr. Whittaker has noticed this same trait while observing Pigeons in the woods.

It was with a peculiar sense of pleasure and satisfaction that I witnessed and heard all the facts about this flock, inasmuch as but few of us expect to again have such opportunities with this Pigeon in the wild state. It is to be hoped that, if Mr. Whittaker continues to successfully increase these birds, he will dispose of a pair to some of our zoölogical gardens, for what would be a more valuable and interesting addition than an aviary of this rapidly diminishing species.

NOTES ON THE BIRDS OF BERMUDA.

BY D. WEBSTER PRENTISS.

BULLETIN 25 of the United States National Museum, on the Natural History of Bermuda, contains some remarks on Bermudian Birds. Since its publication in 1884 two species have been added to the Bermudian Fauna, namely the Mockingbird and the European Goldfinch.

1. *Mimus polyglottos*.—Six pairs of the American Mockingbird were liberated at St. George's in 1893, by Capt. Myers, the German Consul. I have not seen any of them in the neighborhood of Walsingham, but from